Marc Gomez
Assistant Vice Chancellor
Environmental Health & Safety
4600 Health Science Rd., Irvine, CA 92697-2725

UCI Environmental Health & Safety

February 6, 2019

KENNETH C. JANDA
DEAN, SCHOOL OF PHYSICAL SCIENCES

RE: December 2018 Air Monitoring Report for Rowland Hall Fifth Floor

Dear Dean Janda:

The attached report from Omega Environmental, dated January 16, 2019, provides December 2018 air monitoring results for the fifth floor of Rowland Hall during asbestos-related construction activities. We have reviewed the report and addendum, including the air sample measurements. Based on our review, the air sample data has been determined to meet the Environmental Protection Agency (EPA) clearance criteria of 0.01 fibers per cubic centimeters of air (f/cc), which means the air quality in public spaces met or exceeded all applicable standards. Please note, the reported fiber levels above the EPA 0.01 f/cc criteria occurred either: (1) inside the containment area, which is typical and not a breach of containment, or (2) from non-asbestos related work occurring in the construction area (e.g., cutting into non-asbestos containing ceiling tiles and drilling into non-asbestos containing plaster).

Furthermore, visual inspections verified the integrity of critical containment barriers that isolate the work areas from the building occupants.

If you have any questions regarding the environmental health and safety of Rowland Hall, please don't hesitate to contact me via phone (**949.824.6200**) or email (**magomez@uci.edu**). After hours calls may be directed to 949.824.6200.

If you have any questions regarding the construction activities on the fifth floor of Rowland Hall, please contact Design and Construction Services Senior Project Manager Chris Schneider via email (**jcschne1@uci.edu**).

We look forward to a safe and successful completion of the Rowland Hall fire life safety improvement project. Please let us know if you have any questions.

Sincerely,

Marc A. Gomez
Assistant Vice Chancellor
Environmental Health & Safety

Dick T. Sun
Associate Deputy Director
Environmental Health & Safety

Attachment

Asbestos Air Monitoring Summary Report
University of California, Irvine
Rowland Hall – 5th Floor
Irvine, California 92618

Project Number 2018-3221UCI
January 16, 2019

Prepared For:

Susan Robb
University of California, Irvine
4600 Health Science Road
Irvine, California 92697

Prepared By:

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ATTACHMENT A

PCM Air Sample Results and Inspector's Certifications

1. EXECUTIVE SUMMARY

The following is an air monitoring summary report at the Rowland Hall, 5th Floor located at the University of California, Irvine (UCI) in Irvine California. The scope of work consisted of the following asbestos related activities:

- Removal of non-asbestos ceiling tiles
- Work area preparation for other trades
- Clean-up of asbestos-containing debris and assist during the installation of fire sprinkler system
- Spot removal of asbestos-containing materials as necessary
- Air monitoring and project oversight

Project oversight and air monitoring was performed by Jacqueline M. Cole, a California Certified Site Surveillance Technician (CSST #10-4687) with Omega Environmental Services, Inc. (Omega) on December 4 through December 31, 2018. Attachment A includes copies of the air sample results and inspector's certifications.

2. REGULATED AREA SET-UP AND SPOT REMOVAL/CLEAN-UP

Environmental Construction Group, Inc., (ECG) the asbestos abatement contractor established regulated areas, using caution tape and asbestos danger signs at the perimeter of the work areas. The contained regulated work areas were constructed of polyethylene sheeting that isolated the work areas from the public environment. Critical barriers of polyethylene sheeting and duct tape were used to seal windows, vents and entrances to each work area. Asbestos warning signs and caution signs were placed at the entrance to the work areas. The regulated areas complied with the requirements of the California Occupational Safety and Health Administration (Cal-OSHA) standard Title 8, California Code of Regulations (CCR) Section 1529 Asbestos and South Coast Air Quality Management District (SCAQMD), Rule 1403. The purpose of these isolation methods is to ensure that the air quality outside the containment is not contaminated, and to ensure the safety of the building occupants.

Omega conducted a review of the abatement contractor's submittals and performed a visual inspection of the established regulated areas before commencement of any removal work. Decontamination units for the abatement workers were located at the perimeter of the work areas. The contained work areas were then placed under negative pressure, using high efficiency particulate air (HEPA) filtration devices to prevent the migration of asbestos fibers outside the containment. A sprayer was used to mist the work areas with water as necessary, to minimize airborne fiber concentrations in the work areas. Certified workers used disposable coveralls and half-face air purifying respirators with HEPA filters during the asbestos related activities. These protective clothing are removed by the workers as they exit the containment while going through the decontamination units.

HEPA vacuums were used to clean the contained work area upon completion of the installation of the fire sprinkler system or as necessary. After passing the final visual

inspection ECG misted a coating/encapsulant throughout the contained work areas in order to "lock down" any potential residual fibers.

3. AIR SAMPLE RESULTS

Perimeter and clearance air samples were collected during and at the completion of the asbestos related activities. During the asbestos removal activities, the purpose of the perimeter air monitoring was to measure the airborne fiber concentrations outside the containment to determine the effectiveness of the isolation method during the asbestos related activities. Clearance air sampling was conducted within the work areas following the completion of asbestos related activities. Clearance air sample results did not exceed the Environmental Protection Agency (EPA) clearance criteria of 0.01 fibers per cubic centimeters of air (f/cc). The analysis was performed using the Phase Contrast Microscopy (PCM) analytical methodology as described in National Institute for Occupational Safety and Health (NIOSH) 7400 protocol. Omega's representative is NIOSH-582[1] certified and analyzed the collected air samples at the site.

Table 1 provides a summary of the air sample results.

Table 1 - Air Sample Results

Date	Sample #	Sample Location / Work Activity	Result (f/cc)
12/04/18	1	Room 519, inside regulated work area / set up	BDL
12/04/18	2	Room 545, inside regulated work area / set up	BDL
12/04/18	3	Lab blank	ND
12/04/18	4	Field blank	ND
12/05/18	1	Room 519, decon area / ceiling tile removal	0.004
12/05/18	2	Room 545, inside regulated work area / spot removal	0.003
12/05/18	3	Room 545 / HEPA exhaust	0.002
12/06/18	1	Room 519, inside regulated work area / Cosco install	0.003
12/06/18	2	Room 545, inside regulated work area / spot abatement, Cosco install	0.005
12/06/18	3	Negative air exhaust	0.002
12/06/18	4	Room 552A, inside regulated work area / ceiling tile removal	BDL
12/06/18	5	Lab blank	ND
12/06/18	6	Field blank	ND
12/7/18	1	Room 519, inside regulated work area / BNB ceiling tile replacement	Overloaded*
12/7/18	2	Room 545 entry, inside regulated work area / spot abatement and Cosco install	0.004
12/7/18	3	Negative air exhaust	0.002
12/7/18	4	Room 519, inside regulated work area / Clearance	0.006
12/7/18	5	Lab blank	ND
12/7/18	6	Field blank	ND

[1] NIOSH-582 or equivalent – Individual trained to analyze samples by Phase Contrast Microscopy

Date	Sample #	Sample Location / Work Activity	Result (f/cc)
12/7/18	7	Hallway near room 523, Cosco work, not in containment	0.008[1]
12/7/18	1	Room 545, inside regulated work area / Cosco install	<0.002
12/7/18	2	Room 545, inside regulated work area / Cosco install	Overloaded*
12/7/18	3	Room 519, inside regulated work area / BNB install, ECG clean up	0.015
12/7/18	4	Room 519, inside regulated work area / BNB install, ECG clean up	0.014
12/7/18	5	Room 545, inside regulated work area / Cosco install	Overloaded*
12/7/18	6	Lab blank	ND
12/7/18	7	Field blank	ND
12/10/18	1	Room 545, decon / Cosco install, ECG clean up	0.004
12/10/18	2	Room 552 A, decon / Cosco install, ECG clean up	0.005
12/10/18	3	Negative air exhaust	0.002
12/10/18	4	Room 550, inside regulated work area / ECG ceiling tile removal	0.004
12/10/18	5	Hall at room 526 /Cosco install, no containment	Overloaded*[1]
12/10/18	6	Lab blank	ND
12/10/18	7	Field blank	ND
12/11/18	1	Room 552 A, decon / ECG final clean up	0.003
12/11/18	2	Room 545, inside regulated work area / ECG final clean up	0.003
12/11/18	3	Negative air exhaust	0.002
12/11/18	4	Room 545, inside regulated work area / Clearance	0.006
12/11/18	5	Room 545, inside regulated work area / Clearance	0.007
12/11/18	6	Room 545, inside regulated work area / Clearance	0.004
12/11/18	7	Lab blank	ND
12/11/18	8	Field blank	ND
12/12/18	1	Room 550, decon, / Cosco install	0.003
12/12/18	2	Room 552 A, inside regulated work area / BNB install, ECG clean up	0.003
12/12/18	3	Negative air exhaust	BDL
12/12/18	4	Lab blank	ND
12/12/18	5	Field blank	ND
12/12/18	1	Room 552A, inside regulated work area / BNB install	0.016
12/12/18	2	Hallway roving sample by room 533 / Cosco install	0.011[1]
12/12/18	3	Room 552 A, inside regulated work area / BNB install	0.003
12/12/18	4	Room 550, inside regulated work area / Cosco install	0.055
12/12/18	5	Room 550, inside regulated work area / Cosco install	0.046
12/12/18	6	Hallway near room 552 A / BNB ceiling tiles cut	0.039[1]
12/12/18	7	Lab blank	ND
12/12/18	8	Field blank	ND
12/12/18	9	Room 550, inside regulated work area / Cosco install	0.036

[1] NIOSH-582 or equivalent – Individual trained to analyze samples by Phase Contrast Microscopy

Date	Sample #	Sample Location / Work Activity	Result (f/cc)
12/13/18	1	Room 550, decon	0.004
12/13/18	2	Negative air exhaust	0.002
12/13/18	3	Room 552, inside regulated work area / Clearance	0.004
12/13/18	4	Room 552, inside regulated work area / Clearance	0.004
12/13/18	5	Lab blank	ND
12/13/18	6	Sealed blank	ND
12/14/18	1	Room 550 decon / ECG clean up, BNB install	0.003
12/14/18	2	Negative air exhaust	0.002
12/14/18	3	Room 550, inside regulated work area / Clearance	0.004
12/14/18	4	Room 550, inside regulated work area / Clearance	0.007
12/14/18	5	Lab blank	ND
12/14/18	6	Field blank	ND
12/17/18		No air sample collected / Set up work	
12/18/18	1	Negative air exhaust	BDL
12/18/18	2	Room 580, inside regulated work area / ECG ceiling tile removal	0.003
12/18/18	3	Lab blank	ND
12/18/18	4	Field blank	ND
12/19/18	1	Negative air exhaust	0.002
12/19/18	2	Room 582, 580, inside regulated work area inside regulated work area / Cosco install, ECG ceiling tile removal	0.004
12/19/18	3	Lab blank	ND
12/19/18	4	Field blank	ND
12/20/18	1	Negative air exhaust	0.003
12/20/18	2	Room 582, 580, inside regulated work area / Cosco install, ECG clean up	0.005
12/20/18	3	Room 571, decon / ECG ceiling tile removal, Cosco install	0.004
12/20/18	4	Room 570, inside regulated work area / ECG ceiling tile removal	0.003
12/20/18	5	Lab blank	ND
12/20/18	6	Field blank	ND
12/21/18	1	Negative air exhaust	0.002
12/21/18	2	Room 582, 580, inside regulated work area / BNB install ceiling tiles	0.004
12/21/18	3	Room 570, decon / Cosco install	0.003
12/21/18	4	Lab blank	ND
12/21/18	5	Sealed blank	ND
12/26/18	1	Negative air exhaust	0.002
12/26/18	2	Room 582, 580, inside regulated work area / BNB install	0.004

[1] NIOSH-582 or equivalent – Individual trained to analyze samples by Phase Contrast Microscopy

Date	Sample #	Sample Location / Work Activity	Result (f/cc)
12/26/18	3	Room 571, decon, hall / BNB install	0.004
12/26/18	4	533-535 hallway decon / ECG remove ceiling tiles	0.002[1]
12/26/18	5	Room 582, inside regulated work area / Clearance	0.005
12/26/18	6	Room 580, inside regulated work area / Clearance	0.004
12/26/18	7	Room 580 A, inside regulated work area / Clearance	0.006
12/26/18	8	Room 580 C, inside regulated work area / Clearance	0.003
12/26/18	9	Lab blank	ND
12/26/18	10	Field blank	ND
12/27/18	1	Negative air exhaust	BDL
12/27/18	2	Room 533, 535, hall corner / Cosco install	0.008[1]
12/27/18	3	Room 571, hall / Cosco install	0.006[1]
12/27/18	4	Room 570, inside regulated work area / Clearance	0.005
12/27/18	5	Room 570, inside regulated work area / Clearance	0.004
12/27/18	6	Field blank	ND
12/27/18	7	Lab blank	ND
12/27/18	8	Center corridor decon / ECG ceiling tile removal	0.005
12/28/18	1	Negative air exhaust	0.002
12/28/18	2	Room 533, 535 hall corner / Cosco install	0.006[1]
12/28/18	3	Hall at room 571-580, inside regulated work area / Cosco install	0.002
12/28/18	4	Center corridor, inside regulated work area / Spot abatement	0.004
12/28/18	5	Lab blank	ND
12/28/18	6	Field blank	ND

ND – None Detected BDL – Below Detection Limit f/cc – Fiber per cubic centimeter
**Overloaded – Sample had an abundance of particles rendering it unreadable.*
[1] Collected during non-asbestos related construction activities and in high traffic area

[1] NIOSH-582 or equivalent – Individual trained to analyze samples by Phase Contrast Microscopy

Attachment A

PCM/TEM Sample Data Sheet

Project Number	: 2018-3221UCI
Project Site Address	: Rowland Hall, Building 400, UCI Irvine
Sample Date	: 12/04/18
Analysis type	: PCM (NIOSH 7400A) __X___ / TEM (NIOSH 7402) _____
Analysis by	: IH Name Jacquie Cole / Laboratory Name _____
Date Analyzed	: 12/04/18

Sample ID: 1	Start time: 0439	End time: 1207
Sample location: Room 519	Flow rate (LPM): 2.5	
	Total time: 464	Total volume: 1160
Work activity: set up	No of fibers: 4	No of fields: 100
	Airborne fiber concentration (fibers/cc): .001	
Other comments:		

Sample ID: 2	Start time: 0435	End time: 1211
Sample location: Room 545	Flow rate (LPM): 2.5	
	Total time: 456	Total volume: 1140
Work activity: set up	No of fibers: 3.5	No of fields: 100
	Airborne fiber concentration (fibers/cc): .001	
Other comments:		

Sample ID: 3	Start time: N/A	End time: N/A
Sample location: Lab Blank	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.00	
Other comments:		

Sample ID: 4	Start time: N/A	End time: N/A
Sample location: Field Blank	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID:	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID:	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample name (print)	: Jacquie Cole	
Signature	:	Page ___1___ of ___1___

PCM/TEM Sample Data Sheet

Project Number	: 2018-3221UCI
Project Site Address	: Rowland Hall, Building 400, UCI Irvine
Sample Date	: 12/05/18
Analysis type	: PCM (NIOSH 7400A) __X___ / TEM (NIOSH 7402) _____
Analysis by	: IH Name Jacquie Cole / Laboratory Name _____
Date Analyzed	: 12/05/18

Sample ID: 1	Start time: 0434	End time: 1206
Sample location: Room 519 decon	Flow rate (LPM): 2.5	
	Total time: 452	Total volume: 1130
Work activity: Ceiling tile removal,	No of fibers: 10	No of fields: 100
Spot abatement and clean up	Airborne fiber concentration (fibers/cc): .004	
Other comments:		

Sample ID: 2	Start time: 0448	End time: 1212
Sample location: Room 545 entry/ decon	Flow rate (LPM): 2.5	
	Total time: 444	Total volume: 1110
Work activity: set up, spot abatement	No of fibers: 7	No of fields: 100
	Airborne fiber concentration (fibers/cc): .003	
Other comments:		

Sample ID: 3	Start time: 0430	End time: 1214
Sample location: Neg air exhaust for 545	Flow rate (LPM): 2.5	
	Total time: 464	Total volume: 1160
Work activity:	No of fibers: 6	No of fields: 100
	Airborne fiber concentration (fibers/cc): .002	
Other comments:		

Sample ID: 4	Start time:	End time: N/A
Sample location: Lab Blank	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.00	
Other comments:		

Sample ID: 5	Start time:	End time:
Sample location: Field Blank	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.00	
Other comments:		

Sample ID:	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample name (print)	: Jacquie Cole	
Signature	:	Page ___1___ of ___1___

PCM/TEM Sample Data Sheet

Project Number	: 2018-3221UCI
Project Site Address	: Rowland Hall, Building 400, UCI Irvine
Sample Date	: 12/06/18
Analysis type	: PCM (NIOSH 7400A) __X___ / TEM (NIOSH 7402) _____
Analysis by	: IH Name Jacquie Cole / Laboratory Name _____
Date Analyzed	: 12/06/18

Sample ID: 1	Start time: 0417	End time: 1150
Sample location: Room 519 decon	Flow rate (LPM): 2.5	
	Total time: 453	Total volume: 1132.5
Work activity: Cosco install	No of fibers: 7	No of fields: 100
	Airborne fiber concentration (fibers/cc): .003	
Other comments:		

Sample ID: 2	Start time: 0433	End time: 1148
Sample location: Room 545 entry/ decon	Flow rate (LPM): 2.5	
	Total time: 435	Total volume: 1087.5
Work activity: spot abatement, Cosco install	No of fibers: 12	No of fields: 100
	Airborne fiber concentration (fibers/cc): .005	
Other comments:		

Sample ID: 3	Start time: 0414	End time: 1147
Sample location: Negative air exhaust	Flow rate (LPM): 2.5	
	Total time: 453	Total volume: 1132.5
Work activity:	No of fibers: 6	No of fields: 100
	Airborne fiber concentration (fibers/cc): .002	
Other comments:		

Sample ID: 4	Start time: 0719	End time: 1154
Sample location: 552/A	Flow rate (LPM): 2.5	
	Total time: 275	Total volume: 687.5
Work activity: ECG- ceiling tile removal	No of fibers: 4	No of fields: 100
	Airborne fiber concentration (fibers/cc): .002	
Other comments:		

Sample ID: 5	Start time: N/A	End time:
Sample location: Lab Blank	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.00	
Other comments:		

Sample ID: 6	Start time: N/A	End time: N/A
Sample location: Field Blank	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.00	
Other comments:		

Sample name (print)	: Jacquie Cole	
Signature	:	Page ___1___ of ___1___

PCM/TEM Sample Data Sheet

Project Number	: 2018-3221UCI
Project Site Address	: Rowland Hall, Building 400, UCI Irvine
Sample Date	: 12/07/18
Analysis type	: PCM (NIOSH 7400A) __X___ / TEM (NIOSH 7402) _____
Analysis by	: IH Name Jacquie Cole / Laboratory Name _____
Date Analyzed	: 12/07/18

Sample ID: 1	Start time: 0413	End time: 1119
Sample location: Room 519 decon	Flow rate (LPM): 2.5	
	Total time: 426	Total volume: 1065
Work activity: BNB ceiling tile, ECG clean up	No of fibers: overloaded	No of fields: 100
	Airborne fiber concentration (fibers/cc):	
Other comments: ceiling tile cut at the decon, and Cosco hall work nearby		

Sample ID: 2	Start time: 0427	End time: 1201
Sample location: Room 545 entry/ decon	Flow rate (LPM): 2.5	
	Total time: 454	Total volume: 1135
Work activity: Cosco install, ECG spot abatement	No of fibers: 11	No of fields: 100
	Airborne fiber concentration (fibers/cc): .004	
Other comments:		

Sample ID: 3	Start time: 0417	End time: 1203
Sample location: Neg air exhaust	Flow rate (LPM): 2.5	
	Total time: 466	Total volume: 1165
Work activity:	No of fibers: 6	No of fields: 100
	Airborne fiber concentration (fibers/cc): .002	
Other comments:		

Sample ID: 4	Start time: 1049	End time: 1209
Sample location: 519	Flow rate (LPM): 15.0	
	Total time: 80	Total volume: 1200
Work activity: Clearance	No of fibers: 16	No of fields: 100
	Airborne fiber concentration (fibers/cc): .006	
Other comments:		

Sample ID: 5	Start time: N/A	End time:
Sample location: Lab Blank	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID: 6	Start time: N/A	End time:
Sample location: Field Blank	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample name (print)	: Jacquie Cole	
Signature	:	Page ___1___ of ___2___

PCM/TEM Sample Data Sheet

Project Number	: 2018-3221UCI
Project Site Address	: Rowland Hall, Building 400, UCI Irvine
Sample Date	: 12/07/18
Analysis type	: PCM (NIOSH 7400A) __X___ / TEM (NIOSH 7402) _____
Analysis by	: IH Name Jacquie Cole / Laboratory Name _____
Date Analyzed	: 12/07/18

Sample ID: 7	Start time: 0450	End time: 1118
Sample location: Hall near 523	Flow rate (LPM): 2.5	
	Total time: 388	Total volume: 970
Work activity: Cosco work, not in containment	No of fibers: 17	No of fields: 100
	Airborne fiber concentration (fibers/cc): .008	
Other comments: This area also had ceiling tile cutting nearby		

Sample ID: 2	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID: 3	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID: 4	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID: 5	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID: 6	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample name (print)	: Jacquie Cole	
Signature	:	Page ___2___ of ___2___

LA Testing

5431 Industrial Drive Huntington Beach, CA 92649
Tel/Fax: (714) 828-4999 / (714) 828-4944
http://www.LATesting.com / gardengrovelab@latesting.com

LA Testing Order: 331824482
Customer ID: OMEG34
Customer PO:
Project ID:

Attention: Navid Salari
Omega Environmental Services, Inc.
4570 Campus Drive
Suite 30
Newport Beach, CA 92660
Project: 2018-3221 UCI

Phone: (949) 302-6826
Fax:
Received Date: 12/07/2018 01:10 AM
Analysis Date: 12/07/2018
Collected Date: 12/07/2018

Test Report: Fiber Count by Phase Contrast Microscopy (PCM), NIOSH 7400 Method - A Rules, Revision 3, Issue 2, 8/15/94

Sample	Location	Sample Date	Volume (L)	Fibers	Fields	LOD (fib/cc)	Fibers/mm²	Fibers/cc	Notes
1	Room 545	12/07/2018	1200	<5.5	100	0.002	<7.01	<0.002	
331824482-0001									
2	Room 545	12/07/2018							Overloaded
331824482-0002									
3	Room 519	12/07/2018	1200	36	100	0.002	45.9	0.015	
331824482-0003									
4	Room 519	12/07/2018	417.5	12	100	0.006	15.3	0.014	
331824482-0004									
5	Room 545	12/07/2018							Overloaded
331824482-0005									
6	Lab blank	12/07/2018		<5.5	100		<7.01		Lab Blank
331824482-0006									
7	Field blank	12/07/2018		<5.5	100		<7.01		Field Blank
331824482-0007									

The results reported have been blank corrected as applicable.

Analyst(s):
Sotheary Son PCM 7

Michael DeCavallas, Laboratory Manager
or other approved signatory

Limit of detection is 7 fibers/mm². Intra-laboratory Sr values: 5-20 fibers = 0.39, 21-50 fibers = 0.25, 51-100 fibers = 0.22. Inter-laboratory Sr values (Average of EMSL round robin data) = 0.32. The laboratory is not responsible for data reporte which is dependent on volume collected by non-laboratory personnel. Results have been blank corrected as applicable. LA Testing maintains liability limited to cost of analysis. This report relates only to the samples reported above and may n except in full, without written approval by LA Testing. LA Testing bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received ir condition unless otherwise noted.
Samples analyzed by LA Testing Huntington Beach, CA AIHA-LAP, LLC--IHLAP Accredited #101650

Initial report from: 12/07/2018 15:21 PM

OrderID: 331824482

Asbestos Chain of Custody

LA Testing Order Number *(Lab Use Only)*:

#331824482

LA TESTING
5431 INDUSTRIAL DRVIE
HUNTINGTON BEACH, CA
92649
PHONE: (714) 828-4999
FAX: (714) 828-4944

Company : Omega Environmental	**EMSL Customer ID:**
Street: 4570 Campus Dr., Ste 30	**City:** Newport Beach **State/Province:** CA
Zip/Postal Code: **Country:**	**Telephone #:** **Fax #:**
Report To (Name): Navid Sedari	**Please Provide Results:** ☐ Fax ☒ Email
Email Address: navid@omegaenv.com	**Purchase Order:**
Project Name/Number: 2018-3221 UCI	**Connecticut Samples:** ☐ Commercial ☐ Residential
U.S. State Samples Taken:	**EMSL Project ID** *(Internal Use Only)*:

LA Testing-Bill to: ☐ Same ☐ Different - If Bill to is Different note instructions in Comments**
Third Party Billing requires written authorization from third party

Turnaround Time (TAT) Options* - Please Check

☐ 3 Hour ☐ 6 Hour ☒ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

**For TEM Air 3 hours through 6 hours, please call ahead to schedule.*There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with LA Testing's Terms and Conditions located in the Analytical Price Guide.*

PCM - Air ☐ Check if samples are from NY
☒ NIOSH 7400
☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
☐ PLM EPA 600/R-93/116 (<1%)
☐ PLM EPA NOB (<1%)
Point Count
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
Point Count w/Gravimetric
☐ 400 (<0.25%) ☐ 1000 (<0.1%)
☐ NYS 198.1 (friable in NY)
☐ NYS 198.6 NOB (non-friable-NY)
☐ NYS 198.8 SOF-V
☐ NIOSH 9002 (<1%)

TEM – Air ☐ **4-4.5hr TAT** (AHERA only)
☐ AHERA 40 CFR, Part 763
☐ NIOSH 7402
☐ EPA Level II
☐ ISO 10312

TEM - Bulk
☐ TEM EPA NOB
☐ NYS NOB 198.4 (non-friable-NY)
☐ Chatfield SOP
☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
Fibers >10µm ☐ Waste ☐ Drinking
All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
☐ Microvac - ASTM D 5755
☐ Wipe - ASTM D6480
☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
☐ PLM CARB 435 - A (0.25% sensitivity)
☐ PLM CARB 435 - B (0.1% sensitivity)
☐ TEM CARB 435 - B (0.1% sensitivity)
☐ TEM CARB 435 - C (0.01% sensitivity)
☐ EPA Protocol (Semi-Quantitative)
☐ EPA Protocol (Quantitative)

Other:
☐

☐ **Check For Positive Stop – Clearly Identify Homogenous Group** **Filter Pore Size (Air Samples):** ☐ **0.8µm** ☐ **0.45µm**

Samplers Name: Jacque Cole **Samplers Signature:**

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
	7 - PCM		
	See attached		

Client Sample # (s): 1 - 7 **Total # of Samples:**

Relinquished (Client): Jacque Cole **Date:** 12/7/18 **Time:**

Received (Lab): SPLWI **Date:** 12-7-18 **Time:** 1:10 PM

Comments/Special Instructions:

PCM Sample Data Sheet

#331824482

Project Number	: 2018-3221 UCI
Project Site Address	: Rowland Hall Bldg 400 UCI Irvine 5th FL
Sample Date	: 12/7/18
Analysis type	: PCM (NIOSH 7400A) ✓
Analysis by	: IH Name _____ / Laboratory Name _____
Date Analyzed	:

OMEGA ENVIRONMENTAL

Sample ID: 1	Start time: 0437	End time: 0637
Sample location: Room 545	Flow rate (LPM): 10.0	
	Total time: 120	Total volume: 1200
Work activity: Cosco Install	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID: 2	Start time: 0436	End time: 1209
Sample location: Room 545	Flow rate (LPM): 2.5	
	Total time: 453	Total volume: 1132.5
Work activity: Cosco Install	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID: 3	Start time: 0556	End time: 0756
Sample location: Room 519	Flow rate (LPM): 10.0	
	Total time: 120	Total volume: 1200
Work activity: BNB Install / ECG Clean up	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID: 4	Start time: 0450	End time: 0757
Sample location: Room 519	Flow rate (LPM): 2.5	
	Total time: 167	Total volume: 417.5
Work activity: BNB Install / ECG Clean up	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID: 5	Start time: 0938	End time: 1138
Sample location: Room 545	Flow rate (LPM): 10.0	
	Total time: 120	Total volume: 1200
Work activity: Cosco Install	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID: 6	Start time: N/A	End time:
Sample location: lab blank	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample name (print)	: Jacquie Cole
Signature	:

Page 1 of 2

OrderID: 331824482

#331824482

PCM Sample Data Sheet

Project Number	: 2018-3221 UCI
Project Site Address	: Rowland Hall Bldg 400 UCI Irvine 5th Fl
Sample Date	: 12/7/18
Analysis type	: PCM (NIOSH 7400A) ✓
Analysis by	: IH Name ________ / Laboratory Name ________
Date Analyzed	:

OMEGA ENVIRONMENTAL

Sample ID: 7	Start time: N/A	End time:
Sample location: Field Blank	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID:	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID:	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID:	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID:	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID:	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample name (print)	:	
Signature	:	Page 2 of 2

PCM/TEM Sample Data Sheet

Project Number	: 2018-3221UCI
Project Site Address	: Rowland Hall, Building 400, UCI Irvine
Sample Date	: 12/10/18
Analysis type	: PCM (NIOSH 7400A) __X___ / TEM (NIOSH 7402) _____
Analysis by	: IH Name Jacquie Cole / Laboratory Name _____
Date Analyzed	: 12/10/18

Sample ID: 1	Start time: 0417	End time: 1214
Sample location: Room 545 decon	Flow rate (LPM): 2.5	
	Total time: 477	Total volume: 1192.5
Work activity: Cosco install, ECG clean up	No of fibers: 10.5	No of fields: 100
	Airborne fiber concentration (fibers/cc): .004	
Other comments:		

Sample ID: 2	Start time: 0440	End time: 1217
Sample location: Room 552/A decon	Flow rate (LPM): 2.5	
	Total time: 457	Total volume: 1142.5
Work activity: Cosco Install, ECG clean up	No of fibers: 12	No of fields: 100
	Airborne fiber concentration (fibers/cc): .005	
Other comments:		

Sample ID: 3	Start time: 0422	End time: 1215
Sample location: Neg air exhaust	Flow rate (LPM): 2.5	
	Total time: 473	Total volume: 1182.5
Work activity:	No of fibers: 5	No of fields: 100
	Airborne fiber concentration (fibers/cc): .002	
Other comments:		

Sample ID: 4	Start time: 0437	End time: 1158
Sample location: Room 550	Flow rate (LPM): 2.5	
	Total time: 441	Total volume: 1102.5
Work activity: ECG set up, remove ceiling tile	No of fibers: 9	No of fields: 100
	Airborne fiber concentration (fibers/cc): .004	
Other comments:		

Sample ID: 5	Start time: 0443	End time: 1126
Sample location: Hall at Room 526	Flow rate (LPM): 2.5	
	Total time: 403	Total volume: 1007.5
Work activity: Cosco install, no containment	No of fibers: overloaded	No of fields: 100
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID: 6	Start time: N/A	End time:
Sample location: Lab Blank	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.00	
Other comments:		

Sample name (print)	: Jacquie Cole	
Signature	:	Page ___1___ of ___1___

PCM/TEM Sample Data Sheet

Project Number	: 2018-3221UCI
Project Site Address	: Rowland Hall, Building 400, UCI Irvine
Sample Date	: 12/10/18
Analysis type	: PCM (NIOSH 7400A) __X___ / TEM (NIOSH 7402) _____
Analysis by	: IH Name Jacquie Cole / Laboratory Name _____
Date Analyzed	: 12/10/18

Sample ID: 7	Start time: N/A	End time:
Sample location: Field Blank	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.00	
Other comments:		

Sample ID:	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID:	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers: 0	No of fields:
	Airborne fiber concentration (fibers/cc): 0.00	
Other comments:		

Sample ID:	Start time: N/A	End time:
Sample location:	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.00	
Other comments:		

Sample ID:	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID:	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample name (print)	: Jacquie Cole	
Signature	:	Page ___1___ of ___1___

PCM/TEM Sample Data Sheet

Project Number	: 2018-3221UCI
Project Site Address	: Rowland Hall, Building 400, UCI Irvine
Sample Date	: 12/11/18
Analysis type	: PCM (NIOSH 7400A) __X___ / TEM (NIOSH 7402) _____
Analysis by	: IH Name Jacquie Cole / Laboratory Name _____
Date Analyzed	: 12/11/18

Sample ID: 1	Start time: 0424	End time: 1143
Sample location: Room 552/A Decon	Flow rate (LPM): 2.5	
	Total time: 439	Total volume: 503.5
Work activity: ECG final clean up	No of fibers: 4	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.003	
Other comments:		

Sample ID: 2	Start time: 0417	End time: 1143
Sample location: Room 545 entry/ decon	Flow rate (LPM): 2.5	
	Total time: 446	Total volume: 1115
Work activity: ECG final clean up	No of fibers: 7	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.003	
Other comments:		

Sample ID: 3	Start time: 0415	End time: 1138
Sample location: Neg air exhaust	Flow rate (LPM): 2.5	
	Total time: 446	Total volume: 1115
Work activity:	No of fibers: 5.5	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.002	
Other comments:		

Sample ID: 4	Start time: 1027	End time: 1147
Sample location: Room 545	Flow rate (LPM): 15.0	
	Total time: 80	Total volume: 1200
Work activity: Clearance	No of fibers: 17	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.006	
Other comments: 1030-1150		

Sample ID: 5	Start time: 1027	End time: 1147
Sample location: Room 545	Flow rate (LPM): 15.0	
	Total time: 80	Total volume: 1200
Work activity: Clearance	No of fibers: 19	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.007	
Other comments:		

Sample ID: 6	Start time: 1029	End time: 1149
Sample location: Room 545	Flow rate (LPM): 15.0	
	Total time: 80	Total volume: 1200
Work activity: Clearance	No of fibers: 11	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.004	
Other comments:		

Sample name (print)	: Jacquie Cole	
Signature	:	Page ___1___ of ___1___

PCM/TEM Sample Data Sheet

Project Number	: 2018-3221UCI
Project Site Address	: Rowland Hall, Building 400, UCI Irvine
Sample Date	: 12/11/18
Analysis type	: PCM (NIOSH 7400A) __X___ / TEM (NIOSH 7402) _____
Analysis by	: IH Name Jacquie Cole / Laboratory Name _____
Date Analyzed	: 12/11/18

Sample ID: 7	Start time: N/A	End time:
Sample location: Lab Blank	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.00	
Other comments:		

Sample ID: 8	Start time: N/A	End time:
Sample location: Field Blank	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.00	
Other comments:		

Sample ID:	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers: 0	No of fields:
	Airborne fiber concentration (fibers/cc): 0.00	
Other comments:		

Sample ID:	Start time: N/A	End time:
Sample location:	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.00	
Other comments:		

Sample ID:	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID:	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample name (print)	: Jacquie Cole	
Signature	:	Page ___2___ of ___2___

PCM/TEM Sample Data Sheet

Project Number	: 2018-3221UCI
Project Site Address	: Rowland Hall, Building 400, UCI Irvine
Sample Date	: 12/12/18
Analysis type	: PCM (NIOSH 7400A) __X___ / TEM (NIOSH 7402) _____
Analysis by	: IH Name Jacquie Cole / Laboratory Name _____
Date Analyzed	: 12/12/18

Sample ID: 1	Start time: 0424	End time: 1212
Sample location: Room 550 Decon	Flow rate (LPM): 2.5	
	Total time: 468	Total volume: 1170
Work activity: Cosco install	No of fibers: 9	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.003	
Other comments:		

Sample ID: 2	Start time: 0435	End time: 1220
Sample location: Room 552/A	Flow rate (LPM): 2.5	
	Total time: 465	Total volume: 1162.5
Work activity: BNB install, ECG clean up	No of fibers: 8	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.003	
Other comments:		

Sample ID: 3	Start time: 0519	End time: 1212
Sample location: Neg air exhaust	Flow rate (LPM): 2.5	
	Total time: 413	Total volume: 1032.5
Work activity:	No of fibers: 5	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.001	
Other comments:		

Sample ID: 4	Start time: N/A	End time:
Sample location: Lab Blank	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.00	
Other comments:		

Sample ID: 5	Start time: N/A	End time:
Sample location: Field Blank	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.00	
Other comments:		

Sample ID: 6	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample name (print)	: Jacquie Cole	
Signature	:	Page ___1___ of ___1___

PCM/TEM Sample Data Sheet

Project Number	: 2018-3221UCI
Project Site Address	: Rowland Hall, Building 400, UCI Irvine
Sample Date	: 12/13/18
Analysis type	: PCM (NIOSH 7400A) __X___ / TEM (NIOSH 7402) _____
Analysis by	: IH Name Jacquie Cole / Laboratory Name _____
Date Analyzed	: 12/13/18

Sample ID: 1	Start time: 0422	End time: 1149
Sample location: Room 550 decon	Flow rate (LPM): 2.5	
	Total time: 447	Total volume: 1117.5
Work activity: ECG clean up, BNB install	No of fibers: 11	No of fields: 100
	Airborne fiber concentration (fibers/cc): .004	
Other comments:		

Sample ID: 2	Start time: 0424	End time: 1150
Sample location: Neg air exhaust	Flow rate (LPM): 2.5	
	Total time: 446	Total volume: 1115
Work activity:	No of fibers: 5	No of fields: 100
	Airborne fiber concentration (fibers/cc): .002	
Other comments:		

Sample ID: 3	Start time: 0431	End time: 0551
Sample location: 552	Flow rate (LPM): 15.0	
	Total time: 120	Total volume: 1200
Work activity: Clearance	No of fibers: 10	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.004	
Other comments:		

Sample ID: 4	Start time: 0432	End time: 0552
Sample location: 552A	Flow rate (LPM): 15.0	
	Total time: 120	Total volume: 1200
Work activity: Clearance	No of fibers: 12	No of fields: 100
	Airborne fiber concentration (fibers/cc): .004	
Other comments:		

Sample ID: 5	Start time: N/A	End time:
Sample location: Lab Blank	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.00	
Other comments:		

Sample ID: 6	Start time: N/A	End time:
Sample location: Field Blank	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.00	
Other comments:		

Sample name (print)	: Jacquie Cole	
Signature	:	Page ___1___ of ___1___

LA Testing

5431 Industrial Drive Huntington Beach, CA 92649
Tel/Fax: (714) 828-4999 / (714) 828-4944
http://www.LATesting.com / gardengrovelab@latesting.com

LA Testing Order: 331824854
Customer ID: OMEG34
Customer PO:
Project ID:

Attention: Navid Salari
Omega Environmental Services, Inc.
4570 Campus Drive
Suite 30
Newport Beach, CA 92660
Project: 2018-3221 UCI

Phone: (949) 302-6826
Fax:
Received Date: 12/12/2018 13:50 PM
Analysis Date: 12/13/2018
Collected Date: 12/12/2018

Test Report: Fiber Count by Phase Contrast Microscopy (PCM), NIOSH 7400 Method - A Rules, Revision 3, Issue 2, 8/15/94

Sample	Location	Sample Date	Volume (L)	Fibers	Fields	LOD (fib/cc)	Fibers/mm²	Fibers/cc	Notes
1	Room 552/A	12/12/2018	877.5	29	100	0.003	36.9	0.016	
331824854-0001									
2	Hall roving sample 533, USB	12/12/2018	897.5	21	100	0.003	26.8	0.011	
331824854-0002									
3	Room 552/A	12/12/2018	1270	73	100	0.0002	93.0	0.003	
331824854-0003									
4	Room 550	12/12/2018	1022.5	100.1	88	0.003	145	0.055	
331824854-0004									
5	Room 550	12/12/2018	1570	101.3	69	0.002	187	0.046	
331824854-0005									
6	Hall near 552/A BNB	12/12/2018	947.5	76	100	0.003	96.8	0.039	
331824854-0006									
7	Lab blank	12/12/2018		<5.5	100		<7.01		Lab Blank
331824854-0007									
8	Field blank	12/12/2018		<5.5	100		<7.01		Field Blank
331824854-0008									
9	Room 550	12/12/2018	1550	100.1	89	0.002	143	0.036	
331824854-0009									

The results reported have been blank corrected as applicable.

Analyst(s):
Larry Kolk PCM 9

Michael DeCavallas, Laboratory Manager
or other approved signatory

Limit of detection is 7 fibers/mm². Intra-laboratory Sr values: 5-20 fibers = 0.39, 21-50 fibers = 0.25, 51-100 fibers = 0.22. Inter-laboratory Sr values (Average of EMSL round robin data) = 0.32. The laboratory is not responsible for data reported in fibers/cc, which is dependent on volume collected by non-laboratory personnel. Results have been blank corrected as applicable. LA Testing maintains liability limited to cost of analysis. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by LA Testing. LA Testing bears no responsibility for sample collection activities or analytical method limitations. Interpretation and use of test results are the responsibility of the client. Samples received in acceptable condition unless otherwise noted.
Samples analyzed by LA Testing Huntington Beach, CA AIHA-LAP, LLC--IHLAP Accredited #101650

Initial report from: 12/13/2018 14:08 PM

OrderID: 331824854

Asbestos Chain of Custody

LA Testing Order Number *(Lab Use Only)*: #331824854

LA TESTING
5431 INDUSTRIAL DRVIE
HUNTINGTON BEACH, CA
92649
PHONE: (714) 828-4999
FAX: (714) 828-4944

Company : Omega Environmental	**EMSL Customer ID:**
Street: 4570 Campus Dr, Ste 30	**City:** Newport Beach **State/Province:**
Zip/Postal Code: **Country:**	**Telephone #:** **Fax #:**
Report To (Name): Navid Salari	**Please Provide Results:** ☐ Fax ☒ Email
Email Address: Navid@Omegaenv.com	**Purchase Order:**
Project Name/Number: 2018-3221UC1	**Connecticut Samples:** ☐ Commercial ☐ Residential
U.S. State Samples Taken:	**EMSL Project ID** *(Internal Use Only)*:

LA Testing-Bill to: ☐ Same ☐ Different - If Bill to is Different note instructions in Comments**
Third Party Billing requires written authorization from third party

Turnaround Time (TAT) Options* - Please Check

☐ 3 Hour ☐ 6 Hour ☒ 24 Hour ☐ 48 Hour ☐ 72 Hour ☐ 96 Hour ☐ 1 Week ☐ 2 Week

**For TEM Air 3 hours through 6 hours, please call ahead to schedule.*There is a premium charge for 3 Hour TEM AHERA or EPA Level II TAT. You will be asked to sign an authorization form for this service. Analysis completed in accordance with LA Testing's Terms and Conditions located in the Analytical Price Guide.*

PCM - Air ☐ Check if samples are from NY
- ☐ NIOSH 7400
- ☐ w/ OSHA 8hr. TWA

PLM - Bulk (reporting limit)
- ☐ PLM EPA 600/R-93/116 (<1%)
- ☐ PLM EPA NOB (<1%)

Point Count
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)

Point Count w/Gravimetric
- ☐ 400 (<0.25%) ☐ 1000 (<0.1%)
- ☐ NYS 198.1 (friable in NY)
- ☐ NYS 198.6 NOB (non-friable-NY)
- ☐ NYS 198.8 SOF-V
- ☐ NIOSH 9002 (<1%)

TEM – Air ☐ **4-4.5hr TAT (AHERA only)**
- ☐ AHERA 40 CFR, Part 763
- ☐ NIOSH 7402
- ☐ EPA Level II
- ☐ ISO 10312

TEM - Bulk
- ☐ TEM EPA NOB
- ☐ NYS NOB 198.4 (non-friable-NY)
- ☐ Chatfield SOP
- ☐ TEM Mass Analysis-EPA 600 sec. 2.5

TEM – Water: EPA 100.2
- Fibers >10µm ☐ Waste ☐ Drinking
- All Fiber Sizes ☐ Waste ☐ Drinking

TEM- Dust
- ☐ Microvac - ASTM D 5755
- ☐ Wipe - ASTM D6480
- ☐ Carpet Sonication (EPA 600/J-93/167)

Soil/Rock/Vermiculite
- ☐ PLM CARB 435 - A (0.25% sensitivity)
- ☐ PLM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - B (0.1% sensitivity)
- ☐ TEM CARB 435 - C (0.01% sensitivity)
- ☐ EPA Protocol (Semi-Quantitative)
- ☐ EPA Protocol (Quantitative)

Other:
- ☐

☐ **Check For Positive Stop – Clearly Identify Homogenous Group** **Filter Pore Size (Air Samples):** ☐ **0.8µm** ☐ **0.45µm**

Samplers Name: **Samplers Signature:**

Sample #	Sample Description	Volume/Area (Air) HA # (Bulk)	Date/Time Sampled
	9 PCM		

Client Sample # (s): 9 **Total # of Samples:** 9

Relinquished (Client): **Date:** 12/12/18 **Time:** 1345

Received (Lab): SR (WF) **Date:** 12-12-18 **Time:** 1:50PM

Comments/Special Instructions:

#331824854

PCM Sample Data Sheet

Project Number	: 2018-3221 UCI
Project Site Address	: Rowland Hall Bldg 400 UCI Irvine 5th fl
Sample Date	: 12/12/18
Analysis type	: PCM (NIOSH 7400A) ~
Analysis by	: IH Name _____ / Laboratory Name _____
Date Analyzed	:

OMEGA ENVIRONMENTAL

Sample ID: 1	Start time: 0426	End time: ~~10~~ 1018
Sample location: Room 552/A	Flow rate (LPM): 2.5	
	Total time: 351	Total volume: 877.5
Work activity: ~~Cosco~~ BNB Install	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID: 2	Start time: 0431	End time: 1030
Sample location: Hall Roving Sample 533, USB	Flow rate (LPM): 2.5	
	Total time: 359	Total volume: 897.5
Work activity: Cosco Install	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID: 3	Start time: 0433	End time: 0640
Sample location: Room 552/A	Flow rate (LPM): 10.0	
	Total time: 127	Total volume: 1270
Work activity: BNB Install	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID: 4	Start time: 0449	End time: 1150
Sample location: Room 550	Flow rate (LPM): 2.5	
	Total time: 409	Total volume: 1022.5
Work activity: Cosco Install	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID: 5	Start time: 0451	End time: 0728
Sample location: Room 550	Flow rate (LPM): 10.0	
	Total time: 157	Total volume: 1570
Work activity: Cosco Install	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID: 6	Start time: 0501	End time: 1120
Sample location: Hall near 552/A BNB	Flow rate (LPM): 2.5	
	Total time: 379	Total volume: 947.50
Work activity: Ceiling tile Cut area	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample name (print)	: Jacquie Cole
Signature	:

Page 1 of 2

#331824854

PCM Sample Data Sheet

Project Number	: 2018-3221 UCI
Project Site Address	: Rowland Hall Bldg 400 UCI Irvine 5th Fl
Sample Date	: 12/12/18
Analysis type	: PCM (NIOSH 7400A) ✓
Analysis by	: IH Name ______ / Laboratory Name ______
Date Analyzed	:

OMEGA ENVIRONMENTAL

Sample ID: 7	Start time: N/A	End time:
Sample location: Lab Blank	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID: 8	Start time: N/A	End time:
Sample location: Field Blank	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID: 9	Start time: 0915	End time: 1150
Sample location: Room 550	Flow rate (LPM): 10.0	
	Total time: 155	Total volume: 1550
Work activity: Cosco Install	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID:	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID:	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID:	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample name (print)	: Jacquie Cole	
Signature	: [signature]	Page 2 of 2

PCM/TEM Sample Data Sheet

Project Number	: 2018-3221UCI
Project Site Address	: Rowland Hall, Building 400, UCI Irvine
Sample Date	: 12/14/18
Analysis type	: PCM (NIOSH 7400A) __X___ / TEM (NIOSH 7402) _____
Analysis by	: IH Name Jacquie Cole / Laboratory Name _____
Date Analyzed	: 12/14/18

Sample ID: 1	Start time: 0424	End time: 1050
Sample location: Room 550 decon	Flow rate (LPM): 2.5	
	Total time: 386	Total volume: 965
Work activity: ECG clean up, BNB install	No of fibers: 7	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.003	
Other comments:		

Sample ID: 2	Start time: 0406	End time: 1115
Sample location: Neg air exhaust	Flow rate (LPM): 2.5	
	Total time: 429	Total volume: 1072.5
Work activity:	No of fibers: 6	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.002	
Other comments:		

Sample ID: 3	Start time: 0851	End time: 1011
Sample location: 550	Flow rate (LPM): 15.0	
	Total time: 80	Total volume: 1200
Work activity: Clearance	No of fibers: 12	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.04	
Other comments:		

Sample ID: 4	Start time: 0853	End time: 1013
Sample location: 550	Flow rate (LPM): 15.0	
	Total time: 80	Total volume: 1200
Work activity: Clearance	No of fibers: 18	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.007	
Other comments:		

Sample ID: 5	Start time: N/A	End time:
Sample location: Lab Blank	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID: 6	Start time: N/A	End time:
Sample location: Field Blank	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample name (print)	: Jacquie Cole	
Signature	:	Page ___1___ of ___1___

PCM/TEM Sample Data Sheet

Project Number	: 2018-3221UCI
Project Site Address	: Rowland Hall, Building 400, UCI Irvine
Sample Date	: 12/18/18
Analysis type	: PCM (NIOSH 7400A) __X___ / TEM (NIOSH 7402) _____
Analysis by	: IH Name Jacquie Cole / Laboratory Name _____
Date Analyzed	: 12/18/18

Sample ID: 1	Start time: 0605	End time: 1202
Sample location: Negative air exhaust	Flow rate (LPM): 2.5	
	Total time: 357	Total volume: 892.5
Work activity:	No of fibers: 4	No of fields: 100
	Airborne fiber concentration (fibers/cc): .001	
Other comments:		

Sample ID: 2	Start time: 0607	End time: 1204
Sample location: Room 580	Flow rate (LPM): 2.5	
	Total time: 357	Total volume: 892.5
Work activity: ECG ceiling tile removal	No of fibers: 7	No of fields: 100
	Airborne fiber concentration (fibers/cc): .003	
Other comments:		

Sample ID: 3	Start time: N/A	End time:
Sample location: Lab Blank	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.00	
Other comments:		

Sample ID: 4	Start time: N/A	End time:
Sample location: Field Blank	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.00	
Other comments:		

Sample ID: 5	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID: 6	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample name (print)	: Jacquie Cole	
Signature	:	Page ___1___ of ___1___

PCM/TEM Sample Data Sheet

Project Number	: 2018-3221UCI
Project Site Address	: Rowland Hall, Building 400, UCI Irvine
Sample Date	: 12/19/18
Analysis type	: PCM (NIOSH 7400A) __X___ / TEM (NIOSH 7402) _____
Analysis by	: IH Name Jacquie Cole / Laboratory Name _____
Date Analyzed	: 12/19/18

Sample ID: 1	Start time: 0429	End time: 1202
Sample location: Negative air exhaust	Flow rate (LPM): 2.5	
	Total time: 453	Total volume: 1132.5
Work activity:	No of fibers: 6	No of fields: 100
	Airborne fiber concentration (fibers/cc): .002	
Other comments:		

Sample ID: 2	Start time: 0432	End time: 1136
Sample location: Room 582/ 580	Flow rate (LPM): 2.5	
	Total time: 424	Total volume: 1060
Work activity: Cosco install	No of fibers: 10	No of fields: 100
ECG ceiling tile removal	Airborne fiber concentration (fibers/cc): .004	
Other comments:		

Sample ID: 3	Start time: N/A	End time:
Sample location: Lab Blank	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.00	
Other comments:		

Sample ID: 4	Start time: N/A	End time:
Sample location: Field Blank	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.00	
Other comments:		

Sample ID: 5	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID: 6	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample name (print)	: Jacquie Cole	
Signature	:	Page ___1___ of ___1___

PCM/TEM Sample Data Sheet

Project Number	: 2018-3221UCI
Project Site Address	: Rowland Hall, Building 400, UCI Irvine
Sample Date	: 12/20/18
Analysis type	: PCM (NIOSH 7400A) __X___ / TEM (NIOSH 7402) _____
Analysis by	: IH Name Jacquie Cole / Laboratory Name _____
Date Analyzed	: 12/20/18

Sample ID: 1	Start time: 0433	End time: 1157
Sample location: Negative air exhaust	Flow rate (LPM): 2.5	
	Total time: 444	Total volume: 1110
Work activity:	No of fibers: 7	No of fields: 100
	Airborne fiber concentration (fibers/cc): .003	
Other comments:		

Sample ID: 2	Start time: 0425	End time: 1040
Sample location: Room 582/ 580	Flow rate (LPM): 2.5	
	Total time: 375	Total volume: 937.5
Work activity: Cosco install, ECG clean up	No of fibers: 10	No of fields: 100
	Airborne fiber concentration (fibers/cc): .005	
Other comments:		

Sample ID: 3	Start time: 0456	End time: 1156
Sample location: Room 571 decon	Flow rate (LPM): 2.5	
	Total time: 420	Total volume: 1050
Work activity: ECG ceiling tile removal	No of fibers: 9.5	No of fields: 100
Cosco install	Airborne fiber concentration (fibers/cc): .004	
Other comments:		

Sample ID: 4	Start time: 0745	End time: 1158
Sample location: Room 570	Flow rate (LPM): 2.5	
	Total time: 253	Total volume: 632.5
Work activity: ECG ceiling tile removal	No of fibers: 5	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.003	
Other comments:		

Sample ID: 5	Start time:	End time:
Sample location: Lab Blank	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID: 6	Start time:	End time:
Sample location: Field Blank	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample name (print)	: Jacquie Cole	
Signature	:	Page ___1___ of ___1___

PCM/TEM Sample Data Sheet

Project Number	: 2018-3221UCI
Project Site Address	: Rowland Hall, Building 400, UCI Irvine
Sample Date	: 12/21/18
Analysis type	: PCM (NIOSH 7400A) __X___ / TEM (NIOSH 7402) _____
Analysis by	: IH Name Jacquie Cole / Laboratory Name _____
Date Analyzed	: 12/21/18

Sample ID: 1	Start time: 0418	End time: 1153
Sample location: Negative air exhaust	Flow rate (LPM): 2.5	
	Total time: 455	Total volume: 1137.5
Work activity:	No of fibers: 5	No of fields: 100
	Airborne fiber concentration (fibers/cc): .002	
Other comments:		

Sample ID: 2	Start time: 0409	End time: 1154
Sample location: Room 582/ 580	Flow rate (LPM): 2.5	
	Total time: 465	Total volume: 1162.5
Work activity: BNB install	No of fibers: 11	No of fields: 100
	Airborne fiber concentration (fibers/cc): .004	
Other comments:		

Sample ID: 3	Start time: 0408	End time: 1151
Sample location: Room 570 decon	Flow rate (LPM): 2.5	
	Total time: 463	Total volume: 1157.5
Work activity: Cosco install	No of fibers: 8.5	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.003	
Other comments:		

Sample ID: 4	Start time: N/A	End time: N/A
Sample location: Lab Blank	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.00	
Other comments:		

Sample ID: 5	Start time: N/A	End time: N/A
Sample location: Field Blank	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.00	
Other comments:		

Sample ID: 6	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample name (print)	: Jacquie Cole	
Signature	:	Page ___1___ of ___1___

PCM/TEM Sample Data Sheet

Project Number	: 2018-3221UCI
Project Site Address	: Rowland Hall, Building 400, UCI Irvine
Sample Date	: 12/26/18
Analysis type	: PCM (NIOSH 7400A) __X___ / TEM (NIOSH 7402) _____
Analysis by	: IH Name Jacquie Cole / Laboratory Name _____
Date Analyzed	: 12/26/18

Sample ID: 1	Start time: 0425	End time: 1211
Sample location: Negative air exhaust	Flow rate (LPM): 2.5	
	Total time: 466	Total volume: 1165
Work activity:	No of fibers: 7	No of fields: 100
	Airborne fiber concentration (fibers/cc): .002	
Other comments:		

Sample ID: 2	Start time: 0422	End time: 1135
Sample location: Room 582/ 580	Flow rate (LPM): 2.5	
	Total time: 433	Total volume: 1082.5
Work activity: BNB install	No of fibers: 9	No of fields: 100
	Airborne fiber concentration (fibers/cc): .004	
Other comments:		

Sample ID: 3	Start time: 0424	End time: 1208
Sample location: Room 571/ Hall decon	Flow rate (LPM): 2.5	
	Total time: 464	Total volume: 1160
Work activity: BNB install	No of fibers: 9.5	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.004	
Other comments:		

Sample ID: 4	Start time: 0606	End time: 1159
Sample location: 533-535 hallway decon	Flow rate (LPM): 2.5	
	Total time: 353	Total volume: 882.5
Work activity: ECG remove ceiling tile	No of fibers: 5	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.002	
Other comments:		

Sample ID: 5	Start time: 0905	End time: 1025
Sample location: Room 582	Flow rate (LPM): 15.0	
	Total time: 80	Total volume: 1200
Work activity: Clearance	No of fibers: 13	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.005	
Other comments:		

Sample ID: 6	Start time: 0907	End time: 1007
Sample location: Room 580	Flow rate (LPM): 15.0	
	Total time: 80	Total volume: 1200
Work activity: Clearance	No of fibers: 10	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.004	
Other comments:		

Sample name (print)	: Jacquie Cole	
Signature	:	Page ___1___ of ___2___

PCM/TEM Sample Data Sheet

Project Number	: 2018-3221UCI
Project Site Address	: Rowland Hall, Building 400, UCI Irvine
Sample Date	: 12/26/18
Analysis type	: PCM (NIOSH 7400A) __X___ / TEM (NIOSH 7402) _____
Analysis by	: IH Name Jacquie Cole / Laboratory Name _____
Date Analyzed	: 12/26/18

Sample ID: 7	Start time: 0909	End time: 1030
Sample location: Room 580A	Flow rate (LPM): 15.0	
	Total time: 81	Total volume: 1215
Work activity: Clearance	No of fibers: 16	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.006	
Other comments:		

Sample ID: 8	Start time: 0910	End time: 1030
Sample location: Room 580C	Flow rate (LPM): 15.0	
	Total time: 80	Total volume: 1200
Work activity: Clearance	No of fibers: 8	No of fields: 100
	Airborne fiber concentration (fibers/cc): .003	
Other comments:		

Sample ID: 9	Start time: N/A	End time:
Sample location: Lab Blank	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
Cosco install	Airborne fiber concentration (fibers/cc): 0.00	
Other comments:		

Sample ID: 10	Start time: N/A	End time:
Sample location: Field Blank	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.00	
Other comments:		

Sample ID:	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID:	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample name (print)	: Jacquie Cole	
Signature	:	Page ___2___ of ___2___

PCM/TEM Sample Data Sheet

Project Number	: 2018-3221UCI
Project Site Address	: Rowland Hall, Building 400, UCI Irvine
Sample Date	: 12/27/18
Analysis type	: PCM (NIOSH 7400A) __X___ / TEM (NIOSH 7402) _____
Analysis by	: IH Name Jacquie Cole / Laboratory Name _____
Date Analyzed	: 12/27/18

Sample ID: 1	Start time: 0444	End time: 1209
Sample location: Negative air exhaust	Flow rate (LPM): 2.5	
	Total time: 445	Total volume: 1112.5
Work activity:	No of fibers: 4	No of fields: 100
	Airborne fiber concentration (fibers/cc): .001	
Other comments:		

Sample ID: 2	Start time: 0421	End time: 1136
Sample location: Room 533/535/hall corner	Flow rate (LPM): 2.5	
	Total time: 435	Total volume: 1087.5
Work activity: Cosco install	No of fibers: 18	No of fields: 100
	Airborne fiber concentration (fibers/cc): .008	
Other comments:		

Sample ID: 3	Start time: 0441	End time: 1208
Sample location: Hall at Room 571	Flow rate (LPM): 2.5	
	Total time: 447	Total volume: 1117.5
Work activity: Cosco install	No of fibers: 14	No of fields: 100
	Airborne fiber concentration (fibers/cc): .006	
Other comments:		

Sample ID: 4	Start time: 0412	End time: 0537
Sample location: Room 570	Flow rate (LPM): 15.0	
	Total time: 85	Total volume: 1275
Work activity: Clearance	No of fibers: 13	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.005	
Other comments:		

Sample ID: 5	Start time: 0413	End time: 0537
Sample location: Room 570	Flow rate (LPM): 15.0	
	Total time: 84	Total volume: 1260
Work activity: Clearance	No of fibers: 11	No of fields:
	Airborne fiber concentration (fibers/cc): 0.004	
Other comments:		

Sample ID: 6	Start time: N/A	End time:
Sample location: Field Blank	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample name (print)	: Jacquie Cole	
Signature	:	Page ___1___ of ___2___

PCM/TEM Sample Data Sheet

Project Number	: 2018-3221UCI
Project Site Address	: Rowland Hall, Building 400, UCI Irvine
Sample Date	: 12/27/18
Analysis type	: PCM (NIOSH 7400A) __X___ / TEM (NIOSH 7402) ________
Analysis by	: IH Name Jacquie Cole / Laboratory Name ______________
Date Analyzed	: 12/27/18

Sample ID: 7	Start time: N/A	End time:
Sample location: Lab Blank	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.00	
Other comments:		

Sample ID: 8	Start time: 0929	End time: 1210
Sample location: Center corridor decon	Flow rate (LPM): 3.0	
	Total time: 161	Total volume: 483
Work activity: ECG ceiling tile removal	No of fibers: 5	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.005	
Other comments:		

Sample ID:	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID:	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID:	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample ID:	Start time:	End time:
Sample location:	Flow rate (LPM):	
	Total time:	Total volume:
Work activity:	No of fibers:	No of fields:
	Airborne fiber concentration (fibers/cc):	
Other comments:		

Sample name (print)	: Jacquie Cole	
Signature	:	Page ___2___ of ___2___

PCM/TEM Sample Data Sheet

Project Number	: 2018-3221UCI
Project Site Address	: Rowland Hall, Building 400, UCI Irvine
Sample Date	: 12/28/18
Analysis type	: PCM (NIOSH 7400A) __X___ / TEM (NIOSH 7402) _____
Analysis by	: IH Name Jacquie Cole / Laboratory Name _____
Date Analyzed	: 12/28/18

Sample ID: 1	Start time: 0414	End time: 1146
Sample location: Negative air exhaust	Flow rate (LPM): 2.5	
	Total time: 452	Total volume: 1130
Work activity:	No of fibers: 6	No of fields: 100
	Airborne fiber concentration (fibers/cc): .002	
Other comments:		

Sample ID: 2	Start time: 0432	End time: 1143
Sample location: Room 533/535/hall corner	Flow rate (LPM): 2.5	
	Total time: 431	Total volume: 1077.5
Work activity: Cosco install	No of fibers: 15	No of fields: 100
	Airborne fiber concentration (fibers/cc): .006	
Other comments:		

Sample ID: 3	Start time: 0410	End time: 1150
Sample location: Hall at Room 571-580	Flow rate (LPM): 2.5	
	Total time: 460	Total volume: 1150
Work activity: Cosco install	No of fibers: 6	No of fields: 100
	Airborne fiber concentration (fibers/cc): .002	
Other comments:		

Sample ID: 4	Start time: 0412	End time: 1152
Sample location: Center Corridor	Flow rate (LPM): 2.5	
(by elevator)	Total time: 460	Total volume: 1150
Work activity: Spot abatement	No of fibers: 9.5	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.004	
Other comments:		

Sample ID: 5	Start time: N/A	End time:
Sample location: Lab Blank	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.00	
Other comments:		

Sample ID: 6	Start time: N/A	End time:
Sample location: Field Blank	Flow rate (LPM):	
	Total time: N/A	Total volume:
Work activity:	No of fibers: 0	No of fields: 100
	Airborne fiber concentration (fibers/cc): 0.00	
Other comments:		

Sample name (print)	: Jacquie Cole	
Signature	:	Page ___1___ of ___1___

State of California
Division of Occupational Safety and Health

Certified Site Surveillance Technician

Jacqueline M Cole

Name

Certification No. **10-4687**

Expires on **11/17/19**

This certification was issued by the Division of Occupational Safety and Health as authorized by Sections 7180 et seq. of the Business and Professions Code.

ECOLOGICS™
TRAINING INSTITUTE

Certificate of Attendance

CERTIFICATE NUMBER
86567

This is to Certify that

JACQUELINE COLE

Has Completed the Course of

AIR SAMPLING & ANALYSIS OF AIRBORNE ASBESTOS (NIOSH-582 EQUIVALENT)

For purposes of accreditation under section 206 of the Toxic Substances Control Act (TSCA) and compliance with AMAP in accordance with 59 FR 5236 effective April 1994

ARMANDO DUCOING
DIRECTOR

May 27, 2011	**E052311NIOSH582 052311**	
COMPLETION DATE	CLASS NUMBER / STARTING DATE	CERTIFICATE EXPIRES

Ecologics Training Institute
3930 E. Miraloma Avenue, Unit G . Anaheim, CA 92806 . Ph (714) 480-0111 . Fax (714) 480-0222
www.ecologicsonline.com

AIHA Laboratory Accreditation Programs, LLC

acknowledges that

LA Testing Huntington Beach

5431 Industrial Drive, Huntington Beach, CA 92649

Laboratory ID: 101650

along with all premises from which key activities are performed, as listed above, has fulfilled the requirements of the AIHA Laboratory Accreditation Programs (AIHA-LAP), LLC accreditation to the ISO/IEC 17025:2005 international standard, *General Requirements for the Competence of Testing and Calibration Laboratories* in the following:

LABORATORY ACCREDITATION PROGRAMS

✓	**INDUSTRIAL HYGIENE**	Accreditation Expires: June 01, 2020
✓	**ENVIRONMENTAL LEAD**	Accreditation Expires: June 01, 2020
✓	**ENVIRONMENTAL MICROBIOLOGY**	Accreditation Expires: June 01, 2020
☐	**FOOD**	Accreditation Expires:
☐	**UNIQUE SCOPES**	Accreditation Expires:

Specific Field(s) of Testing (FoT)/Method(s) within each Accreditation Program for which the above named laboratory maintains accreditation is outlined on the attached **Scope of Accreditation**. Continued accreditation is contingent upon successful on-going compliance with ISO/IEC 17025:2005 and AIHA-LAP, LLC requirements. This certificate is not valid without the attached **Scope of Accreditation**. Please review the AIHA-LAP, LLC website (www.aihaaccreditedlabs.org) for the most current Scope.

Beth Bair

Elizabeth Bair
Chairperson, Analytical Accreditation Board

Cheryl O. Morton

Cheryl O. Morton
Managing Director, AIHA Laboratory Accreditation Programs, LLC

Revision 17 – 09/11/2018

Date Issued: 09/28/2018

AIHA Laboratory Accreditation Programs, LLC
SCOPE OF ACCREDITATION

LA Testing Huntington Beach
5431 Industrial Drive, Huntington Beach, CA 92649

Laboratory ID: **101650**
Issue Date: 09/28/2018

The laboratory is approved for those specific field(s) of testing/methods listed in the table below. Clients are urged to verify the laboratory's current accreditation status for the particular field(s) of testing/Methods, since these can change due to proficiency status, suspension and/or withdrawal of accreditation.

Industrial Hygiene Laboratory Accreditation Program (IHLAP)

Initial Accreditation Date: 08/01/1981

IHLAP Scope Category	Field of Testing (FoT) (FoTs cover all relevant IH matrices)	Technology sub-type/ Detector	Published Reference Method/Title of In-house Method	Method Description or Analyte (*for internal methods only*)
Chromatography Core	Gas Chromatography	GC/FID	NIOSH 1003 Modified	
			NIOSH 1005	
			NIOSH 1007	
			NIOSH 1400 Modified	
			NIOSH 1500	
			NIOSH 1501	
			NIOSH 1550	
			NIOSH 2000 Modified	
			NIOSH 2500 Modified	
			NIOSH 2546 Modified	
			OSHA 109	
			OSHA 91	
		GC/ECD	NIOSH 5503	
	GC/MS		EPA TO-15	
	Gas Chromatography (Diffusive Samplers)		NIOSH 1500	
			NIOSH 1501 Modified	
			OSHA 1001	
			OSHA 1014	
	Ion Chromatography (IC)		NIOSH 6004 Modified	
			NIOSH 6011	
			NIOSH 6013	
			NIOSH 6016	
			NIOSH 7903	
			NIOSH 7906	
			NIOSH 7907	
IHLAP Scope Category	**Field of Testing (FoT)** (FoTs cover all relevant	**Technology sub-type/**	**Published Reference Method/Title of In-**	**Method Description or Analyte**

	IH matrices)	**Detector**	**house Method**	*(for internal methods only)*
Chromatography Core	Ion Chromatography (IC)		NIOSH 7908	
			OSHA 1008	
			OSHA ID-113	
			OSHA ID-165SG	
			OSHA ID-182	
			OSHA ID-188	
			OSHA ID-214	
			OSHA ID-215 Rev 2	
	Liquid Chromatography	HPLC/UV	NIOSH 2016 Modified	
			NIOSH 2532	
			NIOSH 5042 Modified	
			NIOSH 5506	
			OSHA 1007	
			OSHA 42	
			OSHA 47	
			OSHA 58 Modified	
			OSHA 64	
Spectrometry Core	Atomic Absorption	CVAA	NIOSH 6009 Modified	
	Inductively-Coupled Plasma	ICP/MS	NIOSH 7300 Modified	
			NIOSH 7303	
		ICP/AES	NIOSH 7300 Modified	
			NIOSH 7303	
	X-ray Diffraction (XRD)		NIOSH 7500	
			OSHA ID-142	
	UV/VIS (Colorimetric)		NIOSH 6010	
			NIOSH 6014	
			NIOSH 7600	
			OSHA ID-1019	
			OSHA ID-190	
Asbestos/Fiber Microscopy Core	Phase Contrast Microscopy (PCM)		NIOSH 7400	
Miscellaneous Core	Gravimetric		NIOSH 0500	
			NIOSH 0600	
	Thermo-optical Analysis (TOA)		NIOSH 5040	
Beryllium Testing	Inductively-Coupled Plasma	ICP/MS	NIOSH 7300 Modified	
			NIOSH 7303 Modified	
		ICP/AES	NIOSH 7300 Modified	

A complete listing of currently accredited Industrial Hygiene laboratories is available on the AIHA-LAP, LLC website at: http://www.aihaaccreditedlabs.org

Addendum to Final Report

Asbestos Air Monitoring Report
University of California, Irvine
Rowland Hall – 5th Floor
Irvine, California 92618

Project Number 2018-3221UCI
February 6, 2019

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February 6, 2019

Reg: The following is an addendum to the air monitoring summary report at Rowland Hall, Fifth Floor located at the University of California, Irvine (UCI) in Irvine, California.

Clarification

The results presented in *Table 1-Air Sample Results*, in the fourth column labeled "Result (f/cc)," the results of "BDL," "0.001," and "0.002" were used interchangeably. Any value less than 0.002 fibers/cc or a sample with less than 5.5 fibers is considered below the detection limit (BDL) and can be reported as such by laboratory analysts.

Correction

The results for the sample number 3 (with a sample date of 12/14/18), was recorded as "0.004" f/cc in *Table 1-Air Sample Results*, and as "0.04" f/cc on the *PCM/TEM Sample Data Sheet*. The measurement of "0.04" f/cc on the sample data sheet was the results of a transcription error; it should have been recorded as 0.004 f/cc because of the calculation. Following is the calculation for the subject sample.

$$AC = \frac{\left[\left(\frac{FB}{FL}\right) - \left(\frac{BFB}{BFL}\right)\right] X\ ECA}{1000 \text{ x } FR \text{ x } T \text{ x } MFA}$$

AC = Airborne fiber concentration
FB = Total number of fibers
FL = Total number of fields counted on the filter
BFB = Total number of fibers counted in the blank
BFL = Total number of fields on the blank
ECA = Effective collecting area of filter (385 mm^2)
FR = Pump flow rate (Liters/minute)
MFA = Microscope count field area (0.00785 mm^2)
T = Sample collection time (minute)
1000 = Conversion of Liter to cubic centimeter

$$AC = \frac{\left[\left(\frac{12}{100}\right) - \left(\frac{0}{100}\right)\right] X\ 385}{1000 \text{ x } 15 \text{ x } 80 \text{ x } 0.00785}$$

AC = 0.004 f/cc